

Neural Stem Cell Workflow Solutions

Edition 2

biotechne[®]

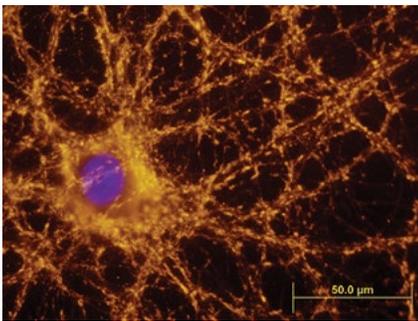
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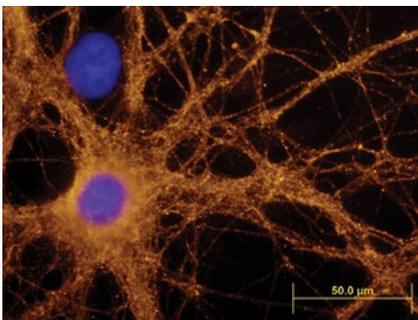
Isolate & Culture

Neural stem cells (NSCs) are a subtype of progenitor cells in the nervous system that can self-renew and give rise to differentiated lineages of neurons and glial cells, including oligodendrocytes and astrocytes.

N21-MAX



Competitor



Increased Synaptic Puncta and Neurite Outgrowth of Primary Neurons Cultured in N21-MAX.

E18 rat hippocampal neurons were grown for 21 days *ex vivo* in media supplemented with either N21-MAX Media Supplement (Catalog # AR008) or the neural media supplement from the most widely-used competitor. Staining for Synaptotagmin (yellow) showed more robust synaptic puncta and increased neurite outgrowth in neurons cultured in N21-MAX compared to those cultured in competitor media. Cells were stained with a Mouse Anti-Rat Synaptotagmin-1 Monoclonal Antibody (Catalog # MAB4364) followed by the NorthernLights™ (NL)557-conjugated Donkey Anti-Mouse IgG Secondary Antibody (Catalog # NL007). Nuclei were counterstained with DAPI (blue, Catalog # 5748).

Proteins, Media Supplements and Matrices for Stem Cell Culture

- **Improved Cell Health:** high-quality culture reagents to ensure better growth and differentiation
- **Efficient Growth:** optimized to enhance neural cell growth in culture

For more information about extracellular matrices, please visit [bio-techne.com](https://www.bio-techne.com).

Product	Catalog #
Bovine Fibronectin, CF	1030-FN
Cultrex Poly-L-Lysine	3438-100-01
Cultrex Stem Cell Qualified RGF BME	3434-010-02
Cultrex Stem Cell Qualified Laminin I	3400-010-03
Cultrex UltiMatrix RGF BME	BME001-05
GMP N-2 MAX Media Supplement	AR016
Human Fibronectin, CF	1918-FN
Human Holo-Transferrin, CF	2914-HT
N-2 Plus Media Supplement	AR003
N-2 MAX Media Supplement	AR009
N21-MAX Insulin Free Media Supplement	AR010
N21-MAX Media Supplement	AR008
N21-MAX Vitamin A Free Media Supplement	AR012
Recombinant Human Fibronectin, ACFP	ACFP4305B
Recombinant Human Fibronectin Fragment 2, CF	3225-FN
Recombinant Human Fibronectin Fragment 3, CF	3938-FN
Recombinant Human Fibronectin Fragment 4, CF	3624-FN
Recombinant Human Fibronectin Full, CF	4305-FNB
Recombinant Human Vitronectin	BT-VTN
Recombinant Human Vitronectin, Animal-free	BT-VTN-AFL

Serum for the Culture of Neural Stem Cells

Fetal bovine serum (FBS) is the ideal growth supplement for cell culture media and is generally preferred over other types of sera due to its high levels of nutrients and optimal combination of growth factors. It is manufactured in a ISO 9001:2105 certified facility and is globally sourced and collected in USDA-approved countries and documented to be exotic disease-free.



- Our serum testing program enables the free screening of serum lots in your specific application
- Lot matching program assists in selecting serum based on the researcher's serum specifications and performance criteria

	Product	Description	Catalog #
Premium Select	Premium Select	Highest quality FBS that meets requirements for hormone profile or other special component testing. Comprehensively tested for performance and quality assurance.	S11550
	Premium Select, Heat Inactivated		S11550H
	Premium Select, Gamma Irradiated, Heat Inactivated		S11550GH
	Premium Select, Gamma Irradiated		S11550G
Optima	Optima, Heat Inactivated	High quality FBS that is frequently used when extensive component testing is required. Comprehensively tested for performance and quality assurance.	S12450H
	Optima		S12450
	Optima, Gamma Irradiated, Heat Inactivated		S12450GH
	Optima, Gamma Irradiated		S12450G
Premium	Premium, Heat Inactivated	High quality FBS, most widely used for a variety of cell culture applications. Comprehensively tested for performance and quality assurance.	S11150H
	Premium		S11150
Specialty	Dialyzed 12-14kD	High quality FBS, used for specific application needs, comprehensively tested for performance and quality assurance.	S12850
	Dialyzed 12-14kD, Heat Inactivated		S12850H
	Charcoal/Dextran Treated		S11650
	Charcoal/Dextran Treated, Heat Inactivated		S11650H
	Embryonic Stem Cell Qualified		S10250
	Embryonic Stem Cell Qualified, Heat Inactivated		S10250H
	TET Tested		S10350
	TET Tested, Heat Inactivated		S10350H
	Hybridoma Qualified		S10650
	Hybridoma Qualified, Heat Inactivated		S10650H

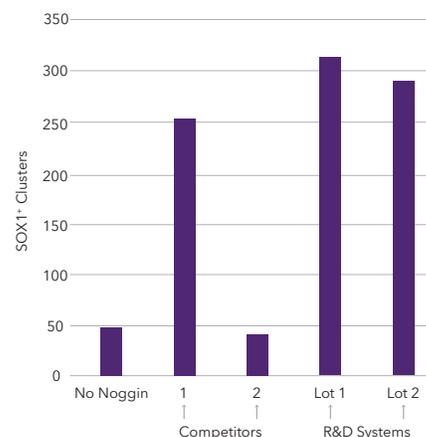
Learn More | bio-technie.com/FBS

Proteins for NSC Expansion and Differentiation

Recombinant Proteins for Neural Stem Cell Culture and Differentiation

- **Clean Results:** high purity and the lowest endotoxin levels on the market
- **Consistent Performance:** biological activity is equivalent across lots

Recombinant Protein	Catalog #			Animal-Free Preclinical Proteins, Catalog #
	Human	Mouse	Rat	Human
BDNF	11166-BD			
β-NGF	256-GF	1156-NG	7815-NG	
BMP-2	355-BM	355-BM	355-BM	
BMP-4	314-BP; 314-BPE	5020-BP		AFL314E
CNTF	257-NT		557-NT	
EGF	236-EG	2028-EG	3214-EG	AFL236
FGF basic	3718-FB; BT-FGFB	3139-FB	3339-FB	BT-FGFB-AFL
FGF-4	235-F4; 7460-F4	5846-F4; 7486-F4		
FGF-8b	423-F8	423-F8		
FGF-10	345-FG	6224-FG	7804-FG	
GDNF	212-GD		512-GF	
IGF-I/IGF-1	291-G1	791-MG	4326-RG	AFL291
Noggin	6057-NG; 3344-NG	6997-NG		
NT-4	268-N4	3236-N4		
PDGF-BB	220-BB		520-BB	AFL220
Sonic Hedgehog (Shh)	1845-SH	464-SH		AFL1845
TGF-β3	8420-B3			
VEGF 165/VEGF 164	BT-VEGF	493-MV	564-RV	BT-VEGF-AFL



Neuroectoderm Induction Using Recombinant Human Noggin. BG01V human embryonic stem cells were driven into early cells of neuroectoderm using a 3 day incubation in recombinant human Noggin (25 µg/mL) from either R&D Systems (Lot 1, Lot 2; Catalog # 6057-NG) or from two separate competitors (Competitor 1, Competitor 2). Control cells were not incubated in Noggin (No Noggin). The cells were stained for the neuroectoderm marker, SOX1 and SOX1+ clusters were quantified under each of the indicated culture conditions. Cells treated with R&D Systems Noggin showed an increase in SOX1+ cells compared to both untreated and competitor-treated cells. R&D Systems Noggin showed consistent differentiation across the lots tested.

[Learn More | bio-techne.com/NSC](https://www.bio-techne.com/NSC)

Small Molecules for NSC Expansion and Maintenance

Use small molecules alone or in combination with growth factors to enhance your control of NSC maintenance and expansion.

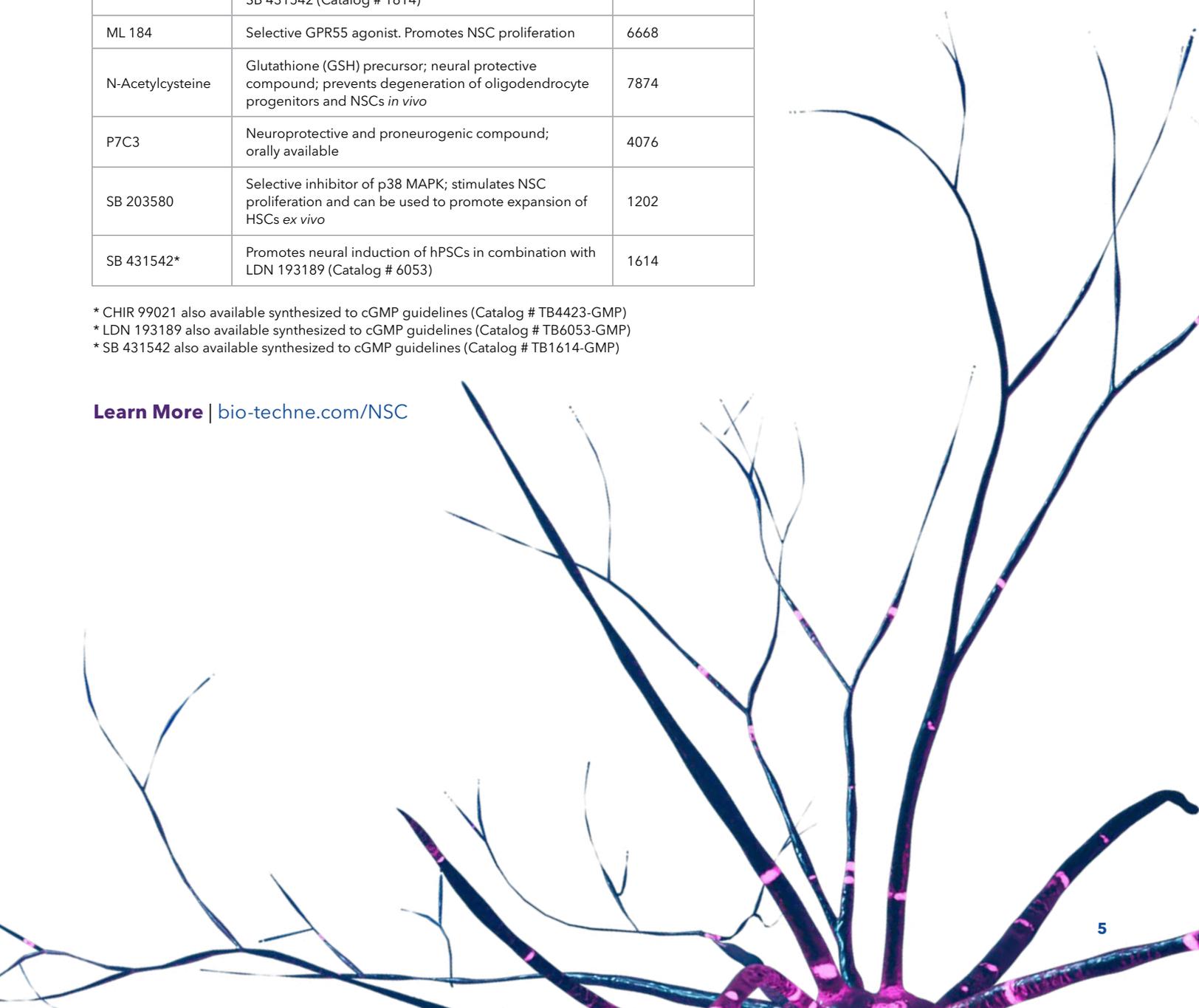
Product	Primary Action	Catalog #
A 83-01	Increases clonal expansion efficiency. Helps maintain homogeneity and long-term <i>in vitro</i> self-renewal of NSCs	2939
CHIR 99021*	Selective GSK-3 inhibitor; enhances human somatic cell conversion to NSCs in combination with PD 0325901 (Catalog # 4192)	4423
Compound E	Accelerates the induction of homogeneous, self-renewing NSCs from hPSCs	6476
LDN 193189*	Promotes neural induction of hPSCs in combination with SB 431542 (Catalog # 1614)	6053
ML 184	Selective GPR55 agonist. Promotes NSC proliferation	6668
N-Acetylcysteine	Glutathione (GSH) precursor; neural protective compound; prevents degeneration of oligodendrocyte progenitors and NSCs <i>in vivo</i>	7874
P7C3	Neuroprotective and proneurogenic compound; orally available	4076
SB 203580	Selective inhibitor of p38 MAPK; stimulates NSC proliferation and can be used to promote expansion of HSCs <i>ex vivo</i>	1202
SB 431542*	Promotes neural induction of hPSCs in combination with LDN 193189 (Catalog # 6053)	1614

* CHIR 99021 also available synthesized to cGMP guidelines (Catalog # TB4423-GMP)

* LDN 193189 also available synthesized to cGMP guidelines (Catalog # TB6053-GMP)

* SB 431542 also available synthesized to cGMP guidelines (Catalog # TB1614-GMP)

Learn More | [bio-techne.com/NSC](https://www.bio-techne.com/NSC)



Stem Cells, Expansion and Cryopreservation Media and Reagents

- **Ready-to-Use:** cells are highly pure and are contamination-free
- **Guaranteed Multi-potency:** confirmed differentiation into neurons, astrocytes, and oligodendrocytes

Product	Primary Action	Catalog #
Chroman 1	Highly potent and selective ROCK 2 inhibitor; improves cell survival after cryopreservation	7163
CryoDefend Stem Cells Media	For defined neural stem cell cryopreservation	CCM018
DMSO, Cell Cryopreserve Grade	Cryoprotective agent which penetrates the cell membrane. Protects the cells from dehydration and shrinking during freezing	7726
Emricasan	Promotes survival of pluripotent stem cells in culture when used as part of the CEPT cocktail	7310
ExCellerate iPSC Expansion Medium	Animal component-free medium for stem cell culture	CCM036
ExCellerate iPSC Expansion Medium, Animal-Free, GMP	GMP-grade animal-free medium for stem cell culture	CCM036-GMP
Mouse Primary Cortical Stem Cells	Isolated from E14.5 CD-1 mice; 2×10^6 cells/vial	NSC002
Polyamine Supplement x1000 (lyophilized)	Media supplement to boost cell growth; used as component of CEPT cocktail to enhance stem cell viability	7739
Rat Primary Cortical Stem Cells	Isolated from E14.5 Sprague-Dawley rats; 3×10^6 cells/vial	NSC001
trans-ISRIB	Potent integrated stress response (ISR) inhibitor; improves survival of differentiated cells following cryopreservation when used as part of the CEPT cocktail	5284
Thiazovivin	ROCK inhibitor; improves the survival of hPSCs on passaging and cryopreservation; improves the efficiency of fibroblast reprogramming and induction of iPSCs	3845
Y-27632 dihydrochloride*	Selective ROCK inhibitor; inhibits ROCK1 (p160 ROCK) and ROCK2; increases survival of stem cells and differentiated cells undergoing cryopreservation and passaging	1254

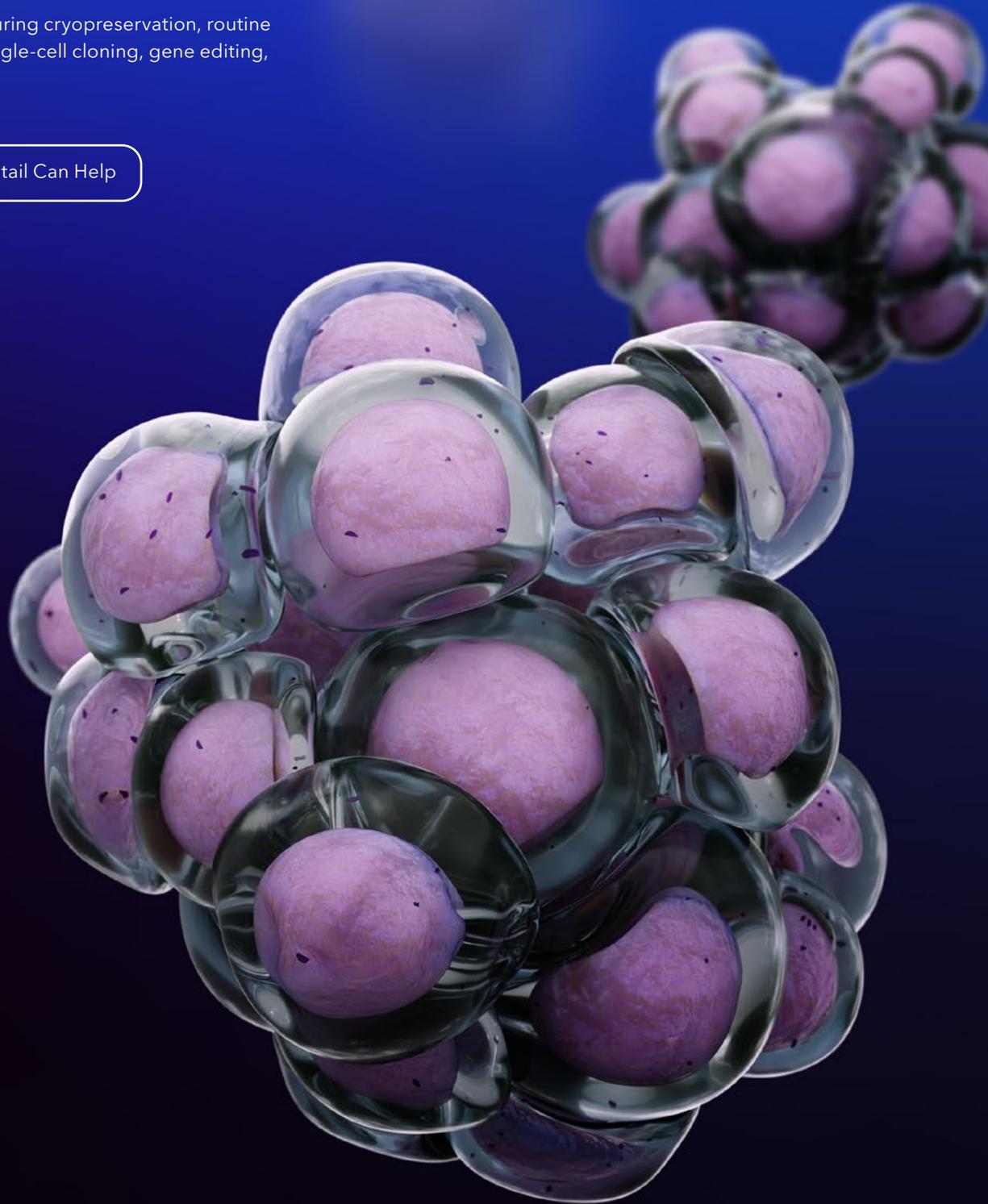
* also available synthesized to cGMP guidelines (Catalog # TB1254-GMP)

[Learn More | bio-techne.com/NSC](https://www.bio-techne.com/NSC)

Improve the Survival of Your PSCs with CEPT Cocktail

Enhances cell viability during cryopreservation, routine long-term passaging, single-cell cloning, gene editing, and differentiation

[Learn How CEPT Cocktail Can Help](#)



Verify

Validating the multipotency of a NPC population prior to their expansion, differentiation, and experimentation will ensure confidence when analyzing the data from downstream experiments.

Using suboptimal, unverified NPC populations puts the investigator at risk for inconsistent results, thus wasting time and reagents. Bio-Techne offers a variety of solutions to quickly and confidently assess NPC multipotency.

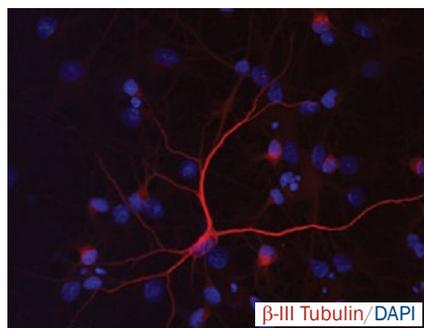
Neural Lineage Functional Identification Kit

- **Definitively Verifies Multipotency:** uses optimized growth factors for unquestionable differentiation into neurons, astrocytes, and oligodendrocytes
- **Time-Saving:** differentiates NPCs in 7-10 days
- **Cost-Efficient:** differentiation supplements and cell-specific marker antibodies packaged together
- **Flexible:** for human, mouse, and rat NPCs

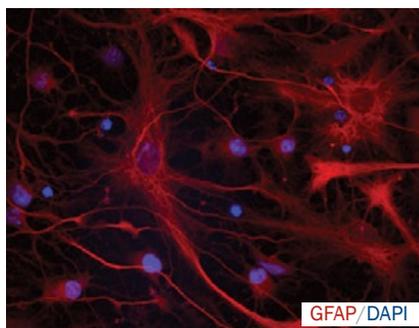
Product	Description	Catalog #
Neural Progenitor Cell Marker Antibody Panel	Human, Mouse, Rat	SC025
Neural 3-Color Immunocytochemistry Kit	Human, Mouse, Rat	SC024

Human/Mouse/Rat Neural Progenitor Cells

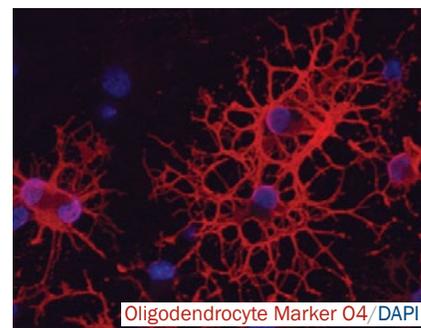
Neuronal Differentiation



Astrocyte Differentiation



Oligodendrocyte Differentiation

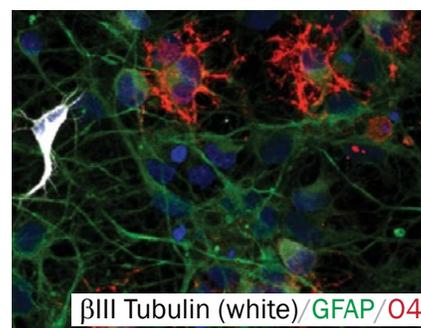


Functional Verification of NSC Multi-potency. Rat cortical stem cells were maintained in culture and differentiated towards neural lineages using the Human/Mouse/Rat Neural Lineage Functional Identification Kit (Catalog # SC028). NSC differentiation into neurons, astrocytes, and oligodendrocytes was validated using the cell-specific marker antibodies supplied in the kit. Nuclei were counterstained with DAPI (blue, Catalog # 5748).

Neural 3-Color Immunocytochemistry Kit

- **Comprehensive Characterization:** includes antibodies for neurons, astrocytes, and oligodendrocytes
- **Time-Efficient:** simultaneous 3-color staining with fluorochrome-conjugated primary antibodies

Differentiation of Rat NSCs Confirmed with the Neural 3-Color Immunocytochemistry Kit. Rat cortical stem cells were differentiated into neurons, astrocytes, and oligodendrocytes using the Human/Mouse/Rat Neural Lineage Functional Identification Kit (Catalog # SC028). Differentiated cells were stained with cell-specific antibodies from the Human/Mouse/Rat Neural 3-Color Immunocytochemistry Kit (Catalog # SC024). The images show NSC cells differentiated into neurons (pseudocolored white; β III Tubulin), astrocytes (green; GFAP), and oligodendrocytes (red; O4). Nuclei were counterstained with DAPI (blue, Catalog # 5748).



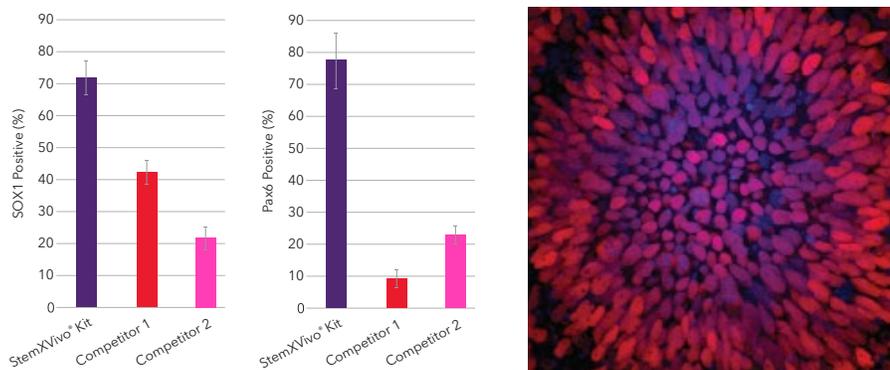
Differentiate

Efficient and consistent NSC differentiation is essential for maximizing research productivity, increasing data reliability, and reducing the cost and labor associated with lengthy differentiation protocols. Bio-Techne remedies these challenges by providing all-in-one kits specifically designed to differentiate embryonic stem (ES)/induced pluripotent stem (iPS) cells into neuronal cell-types, including kits for the directed differentiation of dopaminergic neurons or oligodendrocytes. In addition, Bio-Techne offers a wide selection of small molecules to enhance NSC differentiation.

Differentiation Kits

- **Reproducible Differentiation:** includes optimized growth factors for the consistent differentiation of ES/iPS cells into dopaminergic neurons or oligodendrocytes
- **Eliminates Variation:** reliable differentiation for confidence during downstream data interpretation
- **Consistent Quality:** each kit validated to generate high quality dopaminergic neurons

Product	Description	Catalog #
StemXVivo® Neural Progenitor Differentiation Kit	Human	SC035
Dopaminergic Differentiation Kit	Human, Mouse	SC001B
Oligodendrocytes Differentiation Kit	Mouse	SC004



Differentiation of Pluripotent Stem Cells into Neural Progenitor Cells using StemXVivo® Neural Progenitor Differentiation Kit (Catalog # SC035). Cells demonstrate rosette formation characteristic of neural progenitor cells in culture. To evaluate lineage commitment, the cells were stained with the Anti-Human SOX1 Antibody included in this kit. SOX1 and Pax6 expression levels were quantified using high-content analysis. The data demonstrate that the StemXVivo® Kit results in a higher percentage of SOX1- and Pax6-positive NPCs in comparison to the other commercially available kits.

[Learn More | bio-techne.com/NSC](https://www.bio-techne.com/NSC)

Small Molecules for NSC Differentiation

Use small molecules to gain temporal control of differentiation pathways and to modulate cell fate by targeting specific signaling pathways.

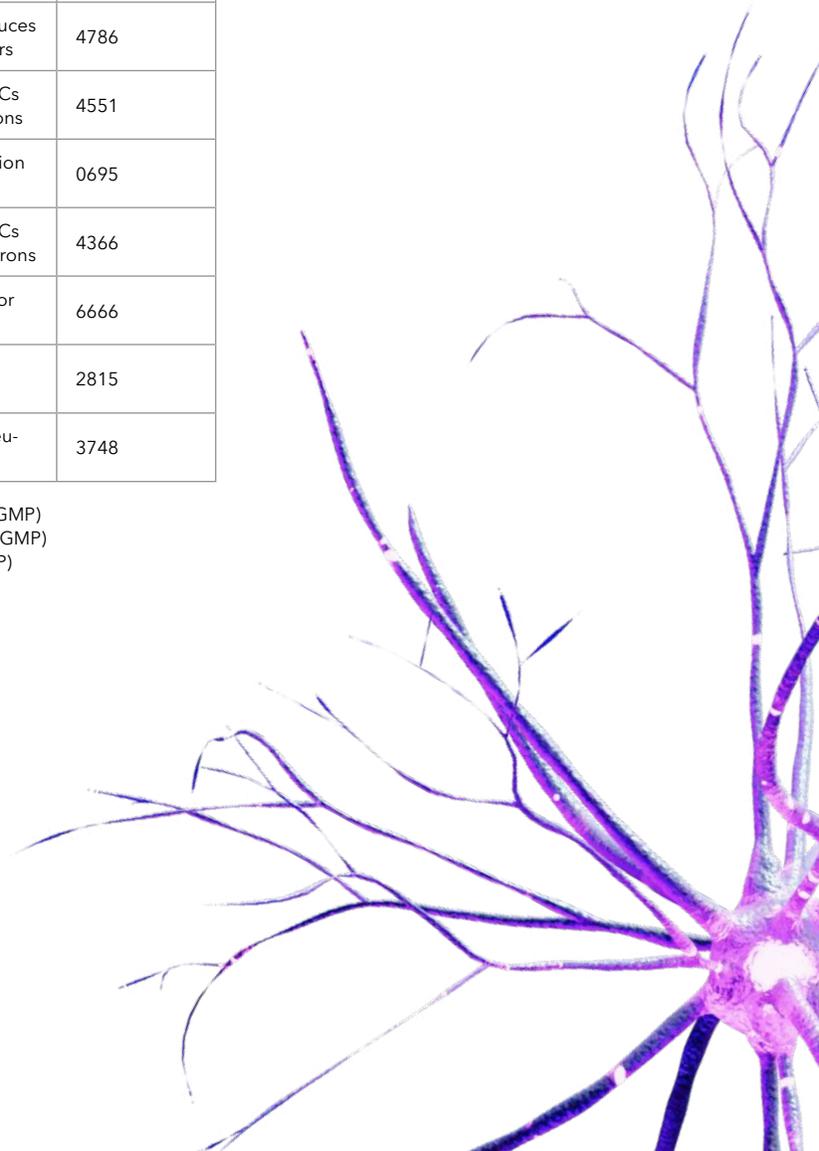
Product	Description	Catalog #
Ascorbic acid	Enhances the survival, growth and differentiation of hPSC derived neurons and astrocytes	4055
CHIR 99021*	GSK-3 inhibitor; enhances differentiation of hPSCs into dopaminergic neurons	4423
DAPT	γ -secretase inhibitor; induces terminal neuronal differentiation of neural progenitors	2634
Forskolin	Adenylyl cyclase activator; induces terminal neuronal differentiation in NSCs; promotes hPSC differentiation into astrocytes	1099
Hh-Ag1.5	Induces differentiation of hPSCs spinal motor neurons and spinal sensory neurons	7807
ISX 9	Induces neuronal differentiation of SVZ progenitors	4439
LDN 193189*	ALK2 and ALK3 inhibitor; induces differentiation of hPSCs into nociceptive sensory neurons; promotes hPSC differentiation into astrocytes	6053
LM 22A4	BDNF mimetic; enhances the survival, growth and differentiation of neurons	4607
PD 0332991	Cyclin-dependent kinase 4/6 (CDK4/6) inhibitor; induces terminal neuronal differentiation of neural progenitors	4786
Purmorphamine	Smo receptor agonist; induces differentiation of hPSCs into spinal motor neurons and GABAergic interneurons	4551
Retinoic acid	Retinoic acid receptor agonist; promotes differentiation of hPSCs into neurons and glia	0695
SAG	Smo receptor agonist; induces differentiation of hPSCs into dopaminergic neurons and GABAergic interneurons	4366
Triiodothyronine (T3)	Promotes differentiation of oligodendrocyte precursor cells in neonatal rats and <i>in vitro</i>	6666
Valproic acid, sodium salt	Histone deacetylase inhibitor; promotes neuronal differentiation	2815
XAV 939*	Tankyrase (TNKS) inhibitor; promotes cortical interneuron and striatal neuronal differentiation	3748

* CHIR 99021 also available synthesized to cGMP guidelines (Catalog # TB4423-GMP)

* LDN 193189 also available synthesized to cGMP guidelines (Catalog # TB6053-GMP)

* XAV 939 also available synthesized to cGMP guidelines (Catalog # TB3748-GMP)

Learn More | [bio-techne.com/NSC](https://www.bio-techne.com/NSC)



Investigate

After carefully validating NSC multipotency, expanding your NSC starting population, and driving cell differentiation, it is important to investigate the biology of newly formed cells. Bio-Techne offers a variety of tools to investigate neural function including agonists, antagonists, modulators, and blockers to functionally characterize the receptors and ion channels expressed by NSC-derived cells. In addition, explore synaptic development and function with our vast selection of neuroscience-related antibodies.

Agonists, Antagonists, Modulators, and Blockers to Investigate Neural Function

- Modulate neuronal function by targeting specific receptors and ion channels
- Characterize receptors and ion channels expressed in your cells

Product	Description	Catalog #
2R,6R-Hydroxynorketamine hydrochloride	Enhances AMPA currents; decreases D-serine; lacks ketamine-related side effects	6094
(+)-Bicuculline	Potent GABA _A antagonist	0130
C 101248	Selective and potent inhibitor of both mouse and human THIK-1	8007
CGP 35348	Brain penetrant, selective GABA _B antagonist	1245
CNQX disodium salt	Potent non-NMDA iGluR antagonist	1045
D-GsMTx4	TRPC1/6 and Piezo2 inhibitor	7170
DL-AP5	Potent, selective NMDA antagonist	0105
GT 949	Potent and selective positive allosteric modulator of EAAT2	6578
(+)-MK 801 maleate	Non-competitive NMDA antagonist, acts at ion channel site	0924
MOG (35-55)	Myelin oligodendrocyte glycoprotein peptide; induces EAE in a mouse model of multiple sclerosis	2568
MPEP hydrochloride	mGlu ₅ antagonist and positive allosteric modulator at mGlu ₄	1212
PE 22-28	Potent inhibitor of TREK-1 channels	7868
(S)-Norketamine hydrochloride	NMDA receptor modulator	6112
Tetrodotoxin	Na ⁺ channel blocker	1078
Varenicline tartrate	Orally active, subtype-selective $\alpha 4\beta 2$ partial agonist	3754
VU 6005649	Positive allosteric modulator of mGlu7 and mGlu8 receptors; NK1 antagonist	6893
Xanomeline oxalate	Functionally selective M ₁ agonist	3569

Photoswitchable Ligands

- Allow the regulation of neuronal ion channels and receptors in response to different wavelengths
- Enable a high degree of spatial and temporal control over neuronal signaling

Product	Description	Catalog #
AAQ	Photoswitchable Kv channel blocker	5462
OptoBI-1	Photoswitchable TRPC3/6/7 agonist	7013
Optovin	Reversible photoactive TRPA1 activator	4901
QAA	Photoswitchable Na _v , K _v , and Ca _v channel blocker	5470

Caged Compounds

- Release your ligands adjacent to their receptors by photolysis
- Overcome the effects of diffusion in the kinetics of the receptor activation

Product	Description	Catalog #
ci-IP3/PM	Caged inositol triphosphate	6210
CNV Dopamine	Caged dopamine; photolysed by UV light	6354
DMNPE-4 AM-caged-calcium	Calcium cage; cell permeable	5948
DPNB-ABT 594	Caged ABT 594 (Catalog # 6576, a selective $\alpha 4\beta 2$ nAChR agonist); suitable for one- or two-photon photolysis	6706
JF-NP-26	Caged Raseglurant (Catalog # 4416); negative allosteric modulator of mGlu ₅ receptors	6553
MNI-caged-L-glutamate	Stable photoreleaser of L-glutamate	1490
RuBi GABA trimethylphosphine	Caged GABA; inhibits neural activity	4709
RuBi-Glutamate	Caged glutamate; excited by visible wavelengths	3574
RuBi-Nicotine	Caged nicotine; rapidly excitable by visible light	3855

[Learn More | bio-techne.com/NSC](https://www.bio-techne.com/NSC)

Fluorescent Probes and Stains

- Visualise cellular and subcellular components
- Specific markers for receptors, organelles or cells.

Product	Description	Catalog #
CELT-133	Selective α_{1A} adrenergic receptor fluorescent antagonist	7952
CELT-327	Potent and selective hA_{2B}/A_3 adenosine receptor fluorescent antagonist	7954
CELT-426	Potent and partially selective hD_2 dopamine receptor fluorescent antagonist	7955
DAF FM diacetate	Cell permeable, photostable, nitric oxide fluorescent indicator	7756
Di 4 ANEPPS	Voltage-sensitive probe; used to detect changes in membrane potential in electrophysiology protocols	7324
FFN 102 mesylate	Selective fluorescent substrate of DAT and VMAT2	5200
FFN 206 dihydrochloride	Fluorescent VMAT2 substrate	5043
FFN 511	Fluorescent substrate for VMAT2	3878
Methoxy-X04	Fluorescent amyloid β detector; brain penetrant	4920
Mito-HE	Fluorescent mitochondrial superoxide indicator in live cells	7641
MitoPY1	Fluorescent mitochondrial hydrogen peroxide indicator	4428
Naloxone fluorescein acetate	Fluorescent opioid antagonist; fluorescent derivative of naloxone (Catalog # 0599)	6046
Sulforhodamine 101	Red fluorescent dye; selective astrocyte marker	5146
SynaptoRed™ C2	Fluorescent dye; stains synaptic vesicles	5118
Thioflavin T	Fluorescent amyloid stain, binds to the stacked β sheets of amyloid fibrils	7122
Tocrifluor T1117	Fluorescent cannabinoid ligand; fluorescent form of AM 251 (Catalog # 1117)	2540

Fluorescent Ion Indicators

- Real time monitoring intracellular ion concentration
- Understand your signaling pathways

Product	Description	Catalog #
Fluo-4 AM	Cell-permeable, fluorescent Ca^{2+} indicator	6255
FURA-2AM	Fluorescent Ca^{2+} indicator	2220
Indo 1AM	Fluorescent Ca^{2+} indicator	6704
ING-2 AM	Fluorescent sodium ion (Na^+) indicator, membrane permeable	7870
IPG-4 AM	Fluorescent potassium ion (K^+) indicator, membrane permeable	7871
Mag-Fura-2 AM	Magnesium (Mg^{2+}) indicator, membrane permeable	7855
MQAE	Fluorescent Cl^- indicator; membrane permeable	7856
OG 488 BAPTA-1 AM	Cell-permeable, fluorescent Ca^{2+} indicator	6256
Phen Green SK diacetate	Heavy metal ion indicator, membrane permeable	7873

Antibodies to Investigate Synapse Development

- Detect presynaptic and postsynaptic proteins expressed by NSC-derived cells

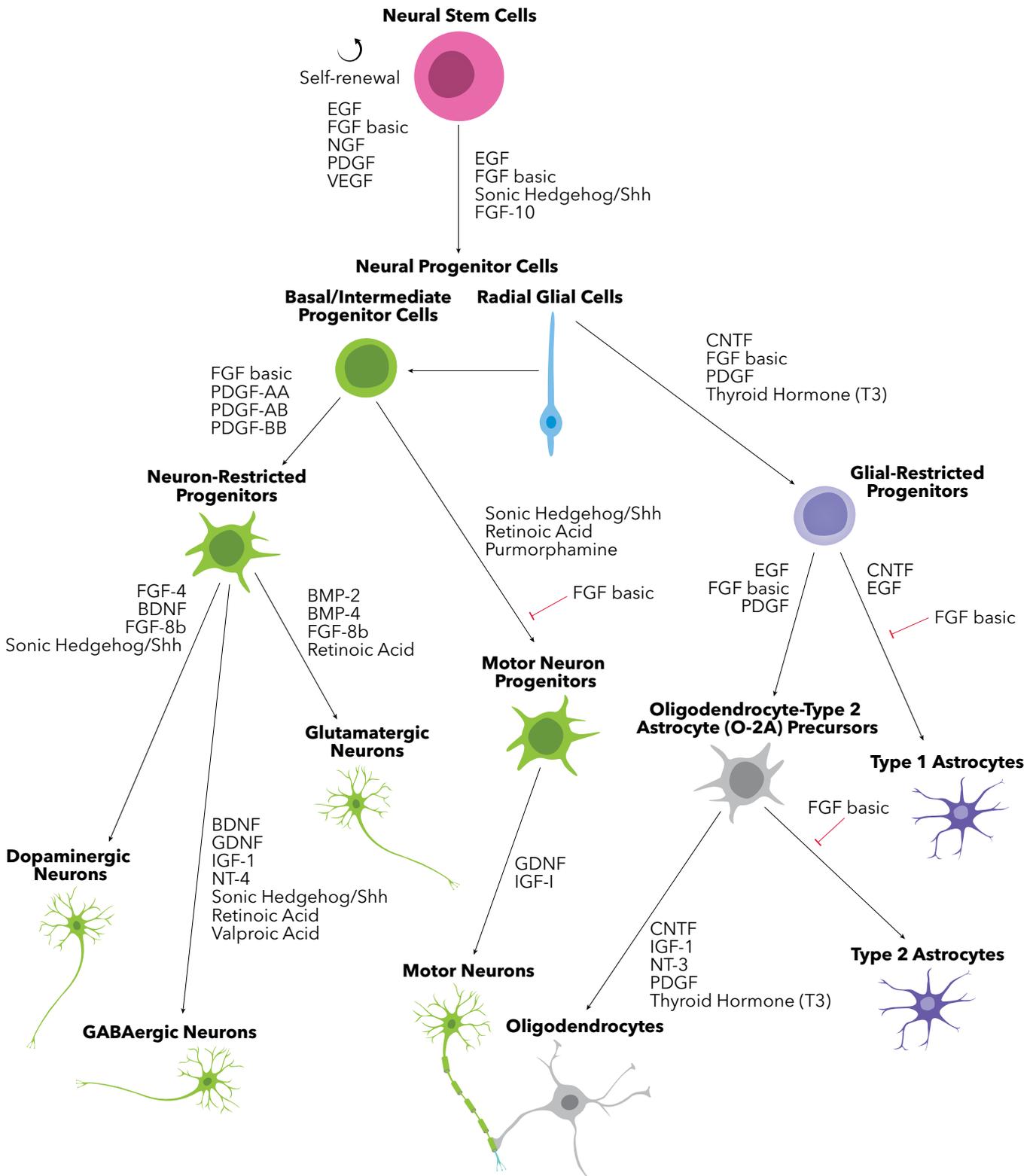
Target Molecule	Description	Applications	Species Reactivity	Catalog #
Alpha - Synuclein	Pre-synaptic protein	WB, ICC, IHC	Human, Mouse	NBP2-15365
CaMKII α	Concentrated at the postsynaptic density	WB, ELISA, ICC, IHC	Human, Mouse, Rat, +	NB100-1983
EAAT1/GLAST-1/SLC1A3	Glutamate transporter	WB, IHC, ICC	Human	NB100-1869
GFAP	Astrocyte marker	WB, IHC, SW	Human	AF2594
Glut1	Glutamate transport into synaptic vesicles	WB, ChIP, FC, ICC, IHC	Human, Mouse	NB110-39113
HOMER1	Concentrated at the postsynaptic density	WB, ICC	Human, Mouse	NBP1-44999
MOG	Identifies myelinating oligodendrocytes	IHC, WB	Mouse	AF2439
Myelin basic protein	Myelin sheath protein	WB, ELISA, FC, ICC, IHC	Human	NBP2-22121
Neuroigin 1/ NLGN1	Post-synaptic protein	WB, IHC	Human, Rat	AF4340
NMDAR2B	NMDA receptor subunit	WB, FC, ICC, IHC, IP	Human, Mouse, Rat	NB300-106
PSD-95	Post-synaptic protein	WB, ICC, IHC	Human, Mouse, Rat	NB300-556
SHANK3	Concentrated at the postsynaptic density	WB, IHC	Human, Mouse, Rat	NBP1-47610
Synapsin I	Pre-synaptic protein	WB, ICC, IHC	Human, Mouse, Rat, +	NB300-104
Synaptophysin	Neuronal secretory vesicle-associated protein	WB, ICC, IHC	Human	NBP2-25170
Synaptotagmin 1	Synaptic vesicle protein	WB, ICC, IHC, IP	Rat	MAB4364
Tyrosine Hydroxylase	Dopaminergic neuron marker	WB, ICC, IHC, SW	Human, Mouse, Rat, +	NB300-109

Species Key: + Additional Species

Applications Key: WB Western blot, ChIP Chromatin Immunoprecipitation, FC Flow Cytometry, ICC Immunocytochemistry, IHC Immunohistochemistry, IP Immunoprecipitation, SW Simple Western™

Additional antibodies for each target can be found at bio-techne.com

Learn More | bio-techne.com/NSC



Where Science Intersects Innovation®

Bio-Techne® | R&D Systems™ Novus Biologicals™ Tocris Bioscience™ ProteinSimple™ ACD™ ExosomeDx™ Asuragen®

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